A COMPREHENSIVE VIDEO TUTORIAL APPROACH TO UNDERSTAND PRE CALCULUS FOR GENERAL ACADEMIC STRAND AT BESTLINK COLLEGE OF THE PHILIPPINES

ABSTRACT

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DISCIPLINE
Education

KEYWORDS
video learning; technology in education; modern learning; comprehensive video

ARTICLE ID
AASGBCPJMRA-B11168

This study examined the effectiveness of video tutorials as a learning tool for General Academic Strand students at Bestlink College of the Philippines. As technology continues to play an increasingly significant role in education, many students struggle to grasp mathematical concepts, often resulting in lower academic performance and reduced confidence. This research addresses that challenge by evaluating the impact of video tutorials on three key areas: student engagement, comprehension, and problem-solving skills. Grounded in Cognitive Load Theory, the study's findings aim to guide educators in creating video content that aligns with students' learning preferences and enhances their academic success. This study examined the impact of video tutorials on Pre-Calculus comprehension among seventy-seven students from the General Academic Strand (GAS) at Bestlink College of the Philippines. Participants were selected using quota sampling to ensure balanced representation from both Grade 11 and Grade 12. Data were collected through a validated survey questionnaire consisting of three sections: (1) examining the relationship between video tutorials and students' understanding of mathematics, (2) evaluating engagement, comprehension, and performance using a Likert scale, and (3) identifying challenges encountered by students in using video-based learning. The results indicated that students generally have a positive perception of video tutorials and believe they make learning mathematics easier. Respondents reported that video tutorials helped them better understand mathematical concepts, solve problems more efficiently, and follow solution steps more clearly. However, a common challenge identified was difficulty maintaining focus during lengthy videos, which can hinder learning. To address this, the study recommends creating shorter, more engaging, and easy-to-follow video content. For instance, incorporating more examples, using colorful visuals, and adding brief breaks or interactive elements may help sustain student interest. The goal is to support both teachers and students in using video tutorials to make math learning more enjoyable and effective. This research is significant as it demonstrates how technology—specifically video tutorials—can enhance student learning. It also provides valuable insights for educators on how to design instructional videos that are both engaging and effective. Future studies may explore the use of video tutorials in other subject areas or across different grade levels. Overall, the findings suggest that while video tutorials are a valuable tool for learning mathematics, they must be thoughtfully designed to maintain student focus and interest.

RECOMMENDED CITATION

Cajucom, V. X., Clidoro, S. Y. L., Deleon, J., Nebres, J. B., Salundaguit, J. E., & Velasco, W. W. (2025). A Comprehensive Video Tutorial Approach to Understand Pre Calculus for General Academic Strand at Bestlink College of the Philippines. *Ascendens Asia Singapore – Bestlink College of the Philippines Journal of Multidisciplinary Research Abstracts, 7*(5), 99.